

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☒ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,761	09/08/2000	Pradeep Kathail	CISCO-3198	2724

Jonathan Velasco  
Sierra Patent Group Ltd  
P O Box 6149  
Stateline, NV 89449

7590 10/05/2004

EXAMINER

TANG, KUO LIANG J

ART UNIT PAPER NUMBER

2122

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/657,761

Applicant(s)

<UNKNOWN>

Examiner

Kuo-Liang J Tang

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/29/2004 has been entered.

### ***Response to Arguments***

2. Claims 1, 5-6, 9-10, 13-14 remain rejected under 35 U.S.C. 102(b).  
Claims 2, 7, 11 and 15 remain rejected under 35 U.S.C. 103(a).  
Claims 3, 8, 12 and 16 remain rejected under 35 U.S.C. 103(a).  
Claim 4 remains rejected under 35 U.S.C. 103(a).
3. Applicant's arguments filed 7/29/2004 have been fully considered but they are not persuasive. Following is the examiner's response to Applicant's arguments with respect to claim 1:

#### **Applicant's argument:**

1. Simons does not teach all of the claimed elements as arranged in the claim "a kernel module within said data processing system coupled for communication with said debug support module." (E.g. see RE page 8, 3<sup>rd</sup> paragraph).

2. Simons is silent as to communications between processes on a single processing system. And Simons does not teach setting a debug flag for the destination process if the source process has a debug flag set. (E.g. see RE page 9, lines 2-4).

**Examiner's response:**

1. The examiner interprets the control processor 11 as the kernel module and the processing subsystem 20 as a debug module. Therefore both the kernel module and debug module are in a single data processing system.

2. The examiner interprets the processing subsystem 20 as a process creating unit which creates a debugging process (source process) to set flag in processing nodes. Also the processing subsystem 20 creates another process (destination process) to set the flag of processing nodes. Therefore these two processes (both source and destination) are all in a single data processing system and the messages can be transmitted and /or exchanged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2122

4. Claims 1, 5-6, 9-10, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Simons et al. US Patent No. 5,805,890 (hereinafter Simons).

As Per Claim 1, Simons discloses a debugger for use in connection with a parallel computer including a plurality of processing nodes. The debugger enables the operator to establish a processing node set in response to certain criteria, such as the respective identifications of the processing node and their prior processing under the debugger. (See Abstract & FIG. 1 and associated text). In that Simons discloses the system that covering the steps of:

“In a data processing system having a memory (E.g. see FIG. 1, MEM 15(i)), an operating system executing within said data processing system comprising: a debug support module configured to associate a debug flag (E.g. see FIG. 2, item 22(i) and item 23(i)) with debug commands issued within the data processing system” (E.g. see col. 1:44-57 and FIG. 3); and

“a kernel module within said data processing system coupled for communication with said debug support module, said kernel module comprising: a process creation unit configured to spawn special processes (E.g. see FIG. 2, processing subsystem 20 and associated text) with a debug flag set for said issued debug commands associated with a debug flag; (E.g. see FIG. 2, control processor 11 and associated text) and a messaging transfer unit configured to transfer messages from a source process (E.g. see FIG. 2, processing subsystem 20 and associated text, the examiner interprets that this is a debugging process, created by the process creating unit (which happen to be the same item), which is to set flag to the processing node(s)) within said data processing system to a destination process (E.g. see FIG. 2, processing node bit vector 22 and associated text,

the examiner interprets that this is a destination process which set the flag of processing nodes) within said data processing system, said message transfer unit further configured to set a debug flag (E.g. see FIG. 2, membership flag 22(i) and membership flag 23(i)) for said destination process responsive to said source process includes said debug flag set.”.

As Per Claim 5, Simons discloses:

“receiving a message for transfer from the source process to the destination process within said data processing system;” (E.g. see FIG. 2, control processor 11 and associated text);

“determining if said source process within said data processing system is associated with a debug flag;” (E.g. see FIG. 2, membership flag 22(i) and associated text);

“associating a debug flag with said destination process responsive to said source process is associated with a debug flag within said data processing system” (E.g. see FIG. 2, membership flag 23(i) and associated text); and

“communicating the message to the destination process within said data processing system.” (E.g. see FIG. 2, control processor 11 and associated text).

As Per Claim 6, the rejection of claim 5 is incorporated and further Simons teaches:

“determining if a debug command is issued within the data processing system (E.g. see col. 5:31-35); spawning a new process associated with said debug command within said data processing system (E.g. see FIG. 4 and associated text); and associating a

Art Unit: 2122

debug flag (E.g. see FIG. 2, membership flag 22(i) and membership flag 23(i) and associated text) with said new process to identify said new process as a debug process within said data processing system. (E.g. see FIG. 2-3, control processor 11 and associated text, i.e. col. 5:23-53).

As Per Claim 9, is the storage device readable claim corresponding to the method claim 5 and is rejected under the same reason set forth in connection of the rejection of claim 5. Further Simons discloses a computer readable medium. (E.g. see col. 10:61-64).

As Per Claim 10, the rejection of claim 9 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

As Per Claim 13, is the system claim corresponding to the method claim 5 and is rejected under the same reason set forth in connection of the rejection of claim 5.

As per Claim 14, the rejection of claim 13 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

---

#### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the



Art Unit: 2122

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 7, 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simons in view of Valizadeh US Patent No. 5,838,994.

As Per Claim 2, the rejection of claim 1 is incorporated and further Simons teaches memory (E.g. see FIG. 1, MEM 15(i)). Simons does not explicitly disclose memory pool. However, Valizadeh teaches a "memory management unit configured to allocate the memory into a main memory pool and a reserve memory pool" (E.g. see col. 3:1-5) said memory management unit further configured to allocate memory from said reserve memory pool only to said special processes having said debug flag set." (E.g. see col. 2:64-67). Therefore, it would have been obvious to incorporate the teaching of Valizadeh into the teaching of Simons to have different memory pools. The modification would have been obvious because one of ordinary skill in the art would have been motivated to better utilize available memory.

As Per Claim 7, the rejection of claim 5 is incorporated and further Simons teaches memory (E.g. see FIG. 1, MEM 15(i)). Simons didn't explicitly disclose memory pool. However, Valizadeh teaches a "memory management unit configured to allocate the memory into a main memory pool within said data processing system and a reserve memory pool within said data processing system" (E.g. see col. 3:1-5). Therefore, it would have been obvious to incorporate the teaching of Valizadeh into the teaching of Simons to have different memory pools within said data processing system. The

Art Unit: 2122

modification would have been obvious because one of ordinary skill in the art would have been motivated to better utilize available memory.

As Per Claim 11, the rejection of claim 9 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 7.

As Per Claim 15, the rejection of claim 13 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 7.

6. Claims 3, 8, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simons in view of Valizadeh further in view of Pouban et al., US Patent No. 4,104,718 (hereinafter Pouban).

As Per Claim 3, the rejection of claim 2 is incorporated and further Simons and Valizadeh teaches memory pool. Simons and Valizadeh do not explicitly disclose allocated memory to said special processes from said reserve memory pool when said main memory pool is depleted. However, Pouban teaches "allocated memory to said special processes from said reserve memory pool responsive to said main memory pool is depleted and said debug flag of said special process is set." (E.g. see col. 39:30-44). Therefore, it would have been obvious to incorporate the teaching of Simons and Valizadeh into the teaching of Pouban to allocated memory to said special processes from said reserve memory pool when said main memory pool is depleted. The

Art Unit: 2122

modification would have been obvious because one of ordinary skill in the art would have been motivated to make memory usage more efficient.

As Per Claim 8, the rejection of claim 7 is incorporated and further Simons and Valizadeh disclose memory pool and process with a debug flag within said data processing system. Simons and Valizadeh do not explicitly disclose allocated memory to said special processes from said reserve memory pool when said main memory pool is depleted. However, Pouban teaches "allocated memory to said special processes from said reserve memory pool when said main memory pool is depleted." (E.g. see col. 39:30-44). Therefore, it would have been obvious to incorporate the teaching of Simons and Valizadeh into the teaching of Pouban to allocated memory to said special processes from said reserve memory pool when said main memory pool is depleted. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make memory usage more efficient.

As Per Claim 12, the rejection of claim 11 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 8.

As Per Claim 16, the rejection of claim 15 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 8.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Simons in view of Holland, US Patent No. 6,243,860.

As Per Claim 4, the rejection of claim 1 is incorporated and further Simons teaches process with debug flag. Simons does not explicitly disclose regular processes lacking a debug flag indicator. However, Holland teaches "spawn regular processes for commands issued which lack a debug flag, said regular processes lacking a debug flag indicator" (E.g. see col. 6:15-18). This is just a regular process spawned without any flag associated with it. Therefore, it would have been obvious to incorporate the teaching of Holland into the teaching of Simons to have a regular processes lacking a debug flag indicator. The modification would have been obvious because one of ordinary skill in the art would have been motivated to increase flexibility for the kernel to create process.

### *Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang J Tang whose telephone number is 703-305-4866. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 703-305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

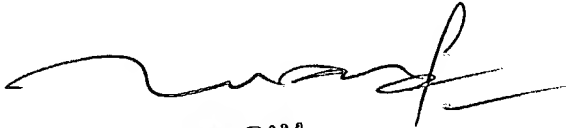
After October 25, 2004, examiner can be reached at new telephone number (571) 272-3705, and the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695.

Art Unit: 2122

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Kuo-Liang J. Tang*

Software Engineer Patent Examiner

  
TUAN DAM  
SUPERVISORY PATENT EXAMINER